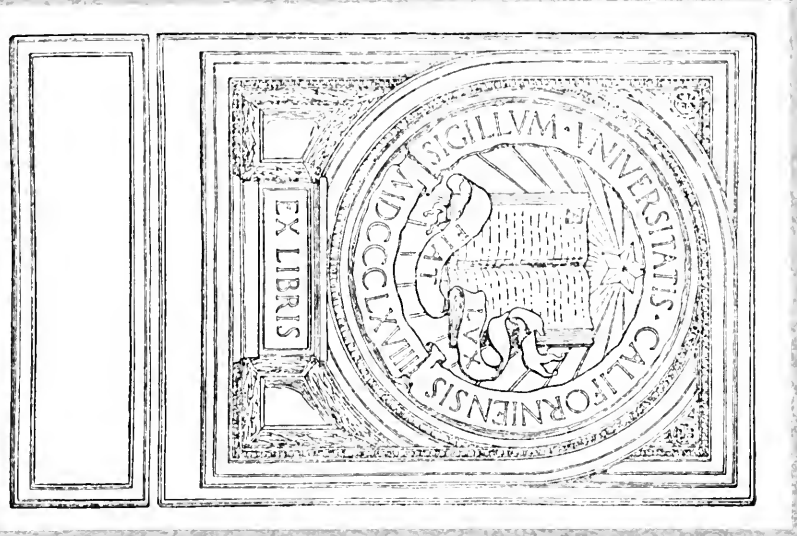
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PROVINCE OF BRITISH COLUMBIA.

DEPARTMENT OF AGRICULTURE
(HORTICULTURAL BRANCH).

FRUIT-GROWING POSSIBILITIES OF SKEENA RIVER AND PORCHER ISLAND DISTRICTS.

BULLETIN No. 33.
(Second Edition.)

PRINTED BY AUTHORITY OF
THE LEGISLATIVE ASSEMBLY OF BRITISH COLUMBIA.

VICTORIA, B.C.:
Printed by WILLIAM H. CULLIN, Printer to the King's Most Excellent Majesty.
1912.

Hon. Price Ellison,

Minister of Agriculture,

Victoria, B.C.

Sir,—I have the honour to submit Report (second edition) on the resources of Skeena River and Porcher Island districts, dealing with the fruit-growing possibilities therein, as compiled by J. F. Carpenter, B.S.A., Assistant Provincial Horticulturist.

I have the honour to be,

Sir,

Your obedient servant,

Wm. E. Scott,

Deputy Minister of Agriculture.

Victoria, B.C., January, 1912.

SKEENA RIVER AND PORCHER ISLAND DISTRICTS.

In accordance with your instructions, I visited the Skeena River district and Porcher Island, leaving Victoria May 8th, returning June 7th. Distributed 620 trees among the settlers for experimental purposes, and upon which a separate report is being submitted.

The proper distribution of the trees entailed the greater part of the month spent in the districts. On this account, and as the districts covered were of such large extent and the transportation facilities rather uncertain, it was impossible to cover as much of the districts as was desirable to make a complete report, especially in regard to areas of different types of soil. It was feasible, however, to obtain a good general idea of conditions in the districts visited, and this information, along with that which was obtained from interviews with the settlers, is respectfully submitted forthwith.

Along the Skeena River for the first sixty-five miles or so from Prince Rupert, there is a very small amount of available agricultural land. The mountains rise directly from the river, except for a few hundred acres of land in odd places. Most of this land is heavily timbered, so the clearing will be fairly expensive. The soil is a loam with a large percentage of river-silt apparently rich in organic matter. Where it is high enough above the river to afford good drainage, the land will prove highly productive. Coast climatic conditions prevail here, and on this account this section is not well adapted to the growth of tree fruits. Small fruits will do well and might prove profitable for local market or canning-factory purposes, but they will lack in shipping qualities owing to the wet climate. Vegetables do especially well on this type of soil. Grasses and cereals grow well there, and, providing climatic conditions are favourable at harvesting-time, this might prove a profitable branch of agriculture to follow on these lands. No extensive development work has been done in any of these places, so that the possibilities of these sections as mentioned above are largely problematical.

After leaving the Coast district and coming into the vicinity of Lakelse River, the mountains recede, and on the north side of the Skeena River there is the Kitsumkalum Valley, and on the south the Lakelse Valley, each of which has a large acreage of first-class agricultural land, and the climatic conditions are well adapted for agricultural or horticultural pursuits.

In reporting on these districts, it would mean much repetition to cover them all fully and for this reason a full report will follow on the Lakelse district, and reference will be made to this district where similar conditions occur in the other places.

LAKELSE VALLEY.

Picture 1 shows a section of the Lakelse Valley taken from a point near the Skeena River and looking towards the Lakelse Lake, some seven miles distant. Lakelse Lake (which has hot springs in its vicinity) is a fresh-water lake, and will, no doubt, prove a valuable adjunct to the district as a summer resort. There is a large amount of land between the lake and Douglas Channel I could not visit, and no mention of same can be made in this report.

The district has a frontage of about fifteen miles along the Skeena River, but narrows considerably towards the lake, which is in a southerly direction. There are, as near as could be ascertained, about 96,000 acres of good agricultural land here, about 50,000 of which is low bench land, and the remainder high bench land (high bench land as referred to here does not necessarily mean high lands, but is used in comparing with the river bench land). These high bench lands are some 50 to 100 feet above the river.

Picture 1.—View of part of Lakelse Valley.

About 1,000 acres of the low bench land is "beaver meadow," and some of it will require drainage. The soil is a deep, rich black loam, and where it does not drain well naturally should be remedied, and if brought into a good state of cultivation should prove very productive. It is covered with considerable underbrush, with little heavy timber, and can be cleared at a minimum expense. This land should prove of exceptional value for the production of grasses and cereal crops, and therefore be well adapted for dairying and similar lines of agriculture. This land is not as well adapted to the growing of fruits as the higher bench land.

The remainder of the low bench is heavily timbered. Most of this timber is valuable for railway-construction work, such as ties, etc., and as soon as there are facilities in the district for the handling of the same it should bring good returns. There is practically no underbrush there, which factor will lessen the cost of clearing considerably. However, as the timber is large and the soil deep, the cost of clearing will be fairly high, varying from $100 to $200 per acre where a good outfit is made use of. This expense should be more than met by the value of the standing timber. The soil is a loam containing a large proportion of silt, as shown in picture 2. It is deep, rich, and drains well naturally in most places. The subsoil varies from clay to gravel. Although the expense of clearing this land would be proportionately high, yet if cleared it should prove exceptionally fine land for all agricultural purposes, being easily worked, retentive of moisture, and very productive.

The higher bench lands will most likely be the first to be developed in quantity. They are much lighter timbered than on the lower benches, and have practically no underbrush, as shown in the above picture. Very little of this timber (except on the bench lands on the side of the valley) is merchantable except for fuel purposes. The trees are easily uprooted, so the cost of clearing will be comparatively small, ranging around $50 to $75 per acre at present labour prices. Most of this land is flat, with slight varying

Picture 2.—Section of soil along roadway on low bench lands, Lakelse Valley.

slopes, principally south-western. The top soil average is about two feet in depth, underlaid with gravel and sand, thus insuring good natural drainage. The surface soil is of a loam and silt composition, and this type of soil, when "brought into condition" (this term is dealt with later), makes a first-class general-purpose soil. This land, providing tree fruits are found to be adapted to the district, will prove better for this purpose than the river bench lands.

There is some bench land on the side of the valley which contains very little surface soil, being mostly a gravel-bed, and it is questionable whether

this will prove satisfactory for agricultural purposes, especially where cultivation is necessary, or where irrigation water is not applied. The prospective purchaser or pre-emptor should examine the soil closely, both surface and subsoil, as the general appearance of the surface soil is no indication of what lies beneath or of the value of the land for agricultural purposes.

"BROUGHT INTO CONDITION."

This term is applicable to practically all the lands in the Skeena River district. The owner of timbered lands should not expect full returns from all crops immediately after clearing. It is no indication that the land is not productive, as the richest soil sometimes yields the poorest returns the first year. After land has been covered with forest growth for years the

Picture 3.—Field-peas grown in 1911 in Lakelse Valley.

soil has a tendency to become slightly acid (often indicated by a mossy growth on the surface), and this condition has to be corrected before good returns can be obtained from most crops. Where the forest growth has been heavy, favouring a cold soil with lack of good air-circulation, bacterial

and chemical action has been working at a minimum. In order to bring the food materials into a soluble form, or in a form in which the plants can make use of them, chemical and bacterial action is required, and this is facilitated principally by a warm, moist soil, good air-circulation, and sufficient organic matter. Some of these conditions are often lacking in the new soils from evergreen forests, and these will require correction to insure the desired results in crops.

The statement above that these soils are probably lacking in organic matter (humus content) might be the better of further comment. In soils on which deciduous trees have been growing the annual leaf-fall keeps the soil well supplied with organic matter. With evergreen trees we do not have this annual leaf-fall except for a few needles, and these make the very

Picture 4.—Section of old orchard in Lakelse Valley.

poorest form of humus. Soils might contain the maximum amount of mineral plant-food, but without humus they would be unproductive. There are several reasons why it is necessary for plant-growth, some of the most important of which are: (1.) Humus during decay forms acids that bring

the mineral plant foods into a soluble condition. (2.) Humus is necessary as food for the bacteria in the soil, which are necessary in building up and breaking down food material. (3.) It keeps the soil in better mechanical condition. (4.) It increases warmth in the soil. (5.) Its water-holding capacity is increased. These reasons should be enough to convince the most pessimistic as to the value of a plentiful supply of humus in these new soils.

Picture 5.—View of part of Kitsumkalum district taken from across the river. Skeena River in foreground.

Accordingly, to bring land of the foregoing description into condition, the following practices will be found remunerative: To correct acidity where it is found, good deep cultivation and underdrainage, if necessary, is advisable (acidity can be determined by the use of blue litmus-paper placed in the moist soil, and this paper will be turned red if acids are present in any quantity). An application of ground stone-lime, 800 to 1,000 lb. per acre, will quicken results where the soil is very acid. An application of a mixed chemical fertilizer for the first year, where it can be obtained at a reasonable cost, will often give good results by supplying available plant-food. In the use of these chemical fertilizers it is always advisable to leave check-rows (where no fertilizer has been applied), so as to determine whether the yield has warranted the cost of the fertilizer. The ploughing-under of a green crop, especially on the higher bench land, will be one of the first essentials to bringing the soil into condition. This might seem a waste of a profitable crop to the owner of land, but he will find that he will be repaid for this crop many times over in the succeeding years. A crop sown in the fall (after early maturing vegetables, etc., are taken off) will often make a good growth before winter, and in ploughing it down either in the fall or early spring it will supply the much-needed humus. Of the green crops, a leguminous crop such as clover, vetches, peas, beans, etc., is the best, as

besides supplying humus it supplies nitrogen, a very necessary element for plant-growth, which it has obtained from the air while growing. In all these soils, and especially where the soil is inclined to be light with a shallow surface soil, good cultivation will be necessary to conserve moisture and facilitate plant-growth and the occasional use of green crops to keep up the humus content. These soils contain enough mineral plant-food to grow crops for years, providing the humus content is not allowed to become depleted.

Picture 6.—Cut along G. T. P. in Kitsumkalum district, showing nature of soil and subsoil. The depth of the surface soil varies.

Authentic information on climatic conditions in this district is difficult to obtain. There is no meteorological station there, and until the same has been installed no reliable information can be obtained. This is something which should be considered immediately by the proper authorities, as, in order to become well acquainted with the possibilities of this district from an agricultural standpoint, and advise *re* its development in different lines of agriculture, it is necessary to know the rainfall, total heat units of the growing

season, length of growing season, etc. As far as could be ascertained, the rainfall would average around 30 inches annually, with a fairly heavy precipitation in the fall, from September to the end of November. The summer months are fairly dry, although occasionally there is a fairly heavy rainfall in June. The snowfall varies from 2 to 4 feet on the level, and generally remains all winter, affording a good protection. Twenty degrees below zero is exceptional during the winter, the thermometer generally being around zero on the coldest days. The season is, at present, some three or four weeks later than Victoria, light frosts being occasional throughout May. Sweet cherries were in blossom about 18th of May, although the season this year is later than the average. They have a late fall, usually not having frosts before October. The days are long during the summer, providing a large amount of sunshine, which would insure rapid growth. There is a possibility that climatic conditions will change considerably as the timber becomes cleared away, and most likely to the advantage of the district. On the whole, considering the latitude of the district as comparing it with inland districts to the south, climatic conditions are especially favourable.

Picture 7.—Clearing in Kitsumkalum Valley. G. T. P. main line on left of picture.

Some information might be given here as received from the settlers and observations taken as to the possibilities of the district. Small fruits and vegetables do exceptionally well. Grasses, clovers, and cereal crops are also doing well where tried, so that the district should become largely self-supporting—i.e., not limiting itself to one branch of agriculture. Returns as high as $1,100 an acre were taken from strawberries and potatoes last year. Prices are high at the present time, and this is no indication of what will be received in the future, but returns are sure to be good. As far as small fruits are concerned, they come into the market at an exceptionally favourable period, after the lower country berries are off, and as a result command high prices, 25 cents a box f.o.b. for strawberries being a common price for them. Berries were shipped from this district last year to Vancouver and arrived

in good condition, thus showing good shipping qualities. Strawberry-plants are producing about 1 lb. per plant with average care.

With the same care as given in the best small-fruit sections they will produce much heavier. Bush fruits also are fine, producing well under cultivation, and are found growing wild.

TREE FRUITS.

Tree fruits are doing well where they have received fair treatment. There is a small orchard on the Thornhill Ranch, along the river-bank, at Little Canyon—a picture a section of which is included here—where the trees are doing well and bearing good crops of fruit, even in the face of semi-neglect

On the other hand, trees that have been planted in the small clearings away from the river have practically all succumbed to sun-scald, frost, or mice injury, or have been broken down by snow. These unfavourable results might be attributed to several causes, viz.: (1.) Many of the trees were planted on the land immediately after clearing, some even before the stumps were removed, and as a consequence the trees did not make a healthy growth and were more liable to injuries as mentioned above. (2.) Facilities for cultivation were such that most of the trees received poor treatment. The "growing season" months were fairly dry, this being unfavourable to growth unless good cultivation had been given. With a wet fall the trees made most of their growth at that season, thus going into the winter in an immature condition and being more susceptible to injury. (3.) The average clearing is little more than two acres in extent and surrounded by timber. This permits but little circulation of air in the clearing, and as a consequence favours extreme and sudden changes of temperature, which results in frost injury and sun-scald. Snow also remains longer here, and as a consequence becomes deep and causes injury. (4.) Little protection has been made against any of the above injuries.

Careful consideration of the above is enough to discourage the opinion of casual observers, that the district is not favourable for the production of tree fruits. The chief difficulties in growing the trees at the present time are due to injury by mice, sun-scald, frost, and deep snow. These conditions will be reduced to a minimum in large clearings under favourable conditions of soil, cultivation, etc., and with the same care as given in the recognized fruit districts, there is no apparent reasons why tree fruits should not prove a success. The trees that were distributed this year should be closely watched, as the conditions under which a number of them were planted were not favourable to good results, and should not be considered in determining the possibilities of the district. A high quality of fruit should be produced. Cherries, especially the sour varieties, do well in the orchards in bearing. Plums, prunes, pears, and apples are also doing well in the bearing orchards, the trees appearing thrifty and free from pests. It is a well-known fact that the nearer fruit can be produced to the northern limit of production the higher the quality. This should guarantee the production of a high quality of fruit in the district.

Transportation facilities up to the present have not been conducive to extensive development work, but with the completion of the Grand Trunk Pacific Railway a market will be provided for this district that should take all that can be produced. The Government is opening up trails and roads

through the district. In order to make the district easy of access by the Grand Trunk Pacific Railway, a bridge over the Skeena is under project, which will be of great value to the locality. There is a ferry in operation across the river at the present time to Copper City, while another is under consideration for the Kitsumkalum district.

Picture 8.—Farm in Kitsumkalum district, showing strawberry patch.

There is a large number of lumbermen, prospectors, and miners in northern British Columbia and Alaska who require supplies that can be produced here. Prince Rupert, Stewart, and other Coast cities and towns will be comparatively close when the railway-line is completed, and these places will afford a large market. The Prairie Provinces, traversed by the G.T.P., will also afford a big market, and the transportation distance from these districts, as compared with those from southern British Columbia and the Western States, will be an advantage to settlers in the Skeena River districts. On the whole, the possible market appears especially favourable.

The land in the district is practically all taken up by pre-emption and purchase. Very little development work has as yet been accomplished. The

chief reasons for this have been the lack of transportation facilities and lack of capital by the settlers. There is room for the investment of a large amount of capital in the district for development purposes, and it should yield good interest. The amount of road-work being done in the district has afforded the means of assisting the settlers until they brought their places into condition to bring them sufficient monetary returns. The cutting of ties is also giving employment to a number of the settlers. It is expected that some of the large land-owners will do extensive clearing in the near future, thereby providing employment for a number of men. With these facts in view, it appears that a man, with little capital, going into the district should be able to tide himself over until such time as his farm was in a condition to support him. By clearing up a small area and getting it under cultivation immediately, it should be only a year or two until good returns would be forthcoming.

It is reported there is a plentiful supply of water to be had at a reasonable distance providing it was required for irrigation purposes. This should not be necessary for ordinary fruit-growing or farming under proper soil treatment.

On the whole, the district looks most promising. With the introduction of the right kind of settlers and with sufficient capital for extensive clearing purposes, the district should advance rapidly.

KITSUMKALUM DISTRICT.

This district runs some eighteen miles north from the Skeena River to Kitsumkalum Lake, and averages about three miles in width. There is about the same amount of land around the lake, where some thirty or more settlers are located, but it is not included in this report.

There is a larger proportion of high bench land in this district to low bench land. Quantities of timber are to be found in the district, varying with the depth and quality of soil. A large quantity at the present time is being cut for ties. Soil types on the lower bench lands differ somewhat from that of the Lakelse Valley, as the subsoil is principally gravel, as referred to below.

The surface soil is practically all of a loam composition similar to the Lakelse soil, and varies greatly in depth, running from 12 inches to several feet (picture 6 showing the soil type). The subsoil is part gravel, and other places clay, with possibly slightly more of the gravel than clay subsoil. There are about 600 acres of land in the lighter-timbered sections, burnt over some eight or ten years ago, and since then it has been lying open to the sun. The soil, as a consequence, has become very light and "burnt out" of humus. It will require considerable green manuring, such as ploughing-down of cover crops, etc., before it will produce well.

The same remarks as made on the Lakelse Valley, on the cost of clearing, handling of the soil, climatic conditions, markets, present development, and the possibilities of the district, are applicable here. There is possibly a slightly heavier snowfall in the interior of the district than in the Lakelse District. There are also a large number of settlers in this district, as it has been held for pre-emption only, and slightly more land under cultivation, two of the settlers having about 10 acres each under cultivation. Picture 7 shows one of the clearings in this district. The main line of the G.T.P. runs through the valley close to the river.

This district will likely advance under the same conditions as the Lakelse Valley, with the same outlet and markets. A great deal will be looked for from this district in the future, providing good settlers and sufficient capital are encouraged to come into the district.

COPPER RIVER DISTRICT.

There are about ten sections or 6,400 acres of land surveyed in this district at the present time, situated on both sides of the Skeena River. It is situated next to the Lakelse and Kitsumkalum districts, and the report on conditions and possibilities as prevail there will cover this district.

On the south side of the river the surface soil is of a loam varying from 8 inches to a few feet in depth on a gravel subsoil. There is very little merchantable timber in the surveyed sections and the expense of clearing will be fairly light. The land will require similar treatment as the Lakelse Valley soils to obtain good results.

Picture 9.—Section of Mr. Stewart's orchard, Copper River district.

On the north side of the river the surface soil is of the same nature, but deeper and heavier timbered, with the same gravel subsoil. At this point is an orchard in bearing containing apples, pears, plums, and cherries, belonging to Mr. Stewart, that has done exceptionally well, being the best orchard along the Skeena River at the present time. A picture taken in the orchard is shown here.

There is a ferry connection across the river at the present time, and the G.T.P. runs through the section on the northern side of the river, thus making the whole district easily accessible to the railway. There are few settlers in the Copper River district at the present time. Some extensive development work is being started on the south side of the river.

KITSELAS DISTRICT.

The Kitselas district is situated about thirteen miles up-river from Kitsumkalum. On the south side of the river there are a few thousand acres of land, mostly bench land and lightly timbered. The soil is a loam, varying in depth, with a gravel subsoil. On the north side of the river there is not as much land available for agricultural purposes. The soil is much deeper than on the south side and most of the land has a decided southern slope. While in this district some crops were observed which had been planted in an experimental way, and which were doing fine, showing good colour and growth. A variety vegetable-garden was also starting well and gave indications of making a fine showing. Tree fruits were found growing under similar conditions to those of the Lakelse Valley, with similar results. Small fruits were doing fine.

Picture 10.—Taken in Kitselas district. Note gooseberry bushes in foreground.

There are very few settlers in this district and no extensive clearing. The climate is probably a little colder than in the Lower Skeena districts, spoken of above, but otherwise soil conditions, possibilities of district, etc., are much the same as in the above-mentioned districts.

LORNE CREEK DISTRICT.

In this district it was impossible to spend any time other than to arrange for a distribution of experimental trees and obtain some information *re* district. It was time the experimental trees were planted, and to insure them being planted in ample time to secure a good start it was necessary to pass over the Upper Skeena district hurriedly.

In this district, according to information obtained from the settlers, there are about 15,000 acres of high bench land and very little bottom land. The soil is a loam 2 to 3 feet in depth, underlaid with a fine gravel subsoil.

The rainfall is said to be not as heavy as at Kitselas, otherwise climatic conditions are much the same, and the report on the districts mentioned above will cover this district. This district receives a good name from those well acquainted with it.

There is a large acreage of land at Meanskinisht and Kitwangah, on which little information was obtained. From conversation with those who knew the districts they were well spoken of.

HAZELTON.

There is a considèrable acreage of land around Hazelton, a report of which will be made by Messrs. Weir and White, now inspecting that part of the country in the interests of the Provincial Department of Agriculture. A photo is attached here which was taken at Hazelton.

PORCHER ISLAND.

Porcher Island is situated about twenty miles south of Prince Rupert and contains a fairly large acreage of land. Four points were visited on the island, viz.: Refuge Bay, Spiller River, Oolna River, and Kitcatla Inlet, where a number of settlers were met and considerable information obtained *re* conditions on the island.

The timber for the most part is light, principally jack-pine and cedar. On this account it might be inferred that the cost of clearing would be small. In a number of places it would where there is very little timber. However, where the timber is heavier the cost will sometimes come fairly high, as the nature of the soil makes it difficult to remove the stumps. Very little clearing has been done, so it was impossible to obtain reliable information on the cost. The photo included here will give a good idea of the class of timber.

The land is mostly rolling, with sufficient slope to offer good drainage, providing the soil drains well naturally. The depth of soil varies greatly, in some places being quite shallow on a gravel or clay subsoil, and in other places a few feet in depth, with the same subsoil. The top soil contains considerable peat, being composed of moss and vegetable growth in different stages of decomposition. In most places the ground is covered with a fairly heavy growth of moss, and this condition, along with the nature of the soil, is responsible for the soil holding an excess of moisture, which does not drain well naturally. Although the settlers reported that they had had very little rain for weeks, the ground was quite wet and soft where the land had not been improved.

One of the first steps to take in the improvement of this land will be a thorough system of drainage. Good, deep, open ditches will be the most satisfactory method, as, besides giving good drainage, they would aerate the

soil to a limited extent. It is difficult to tile-drain land of this type. Another important point which should be kept in view besides drainage is the opening-up of the soil to the air and sun through cultivation to favour decomposition of the vegetable matter and the removal of the acidity in the soil. An application of stone-lime, where it is procurable at a reasonable cost, will hasten improvement of the soil. A chemical fertilizer, for the first couple of years, to supply available plant-food will also be an advantage where a crop is being grown. There is plenty of plant-food in the soil, but it will take a year or more of good aeration and drainage before it can be made available, especially to deep-rooted plants. Questions were asked by the settlers as to the treatment of the mossy growth on the surface. Where it can be done at a reasonable cost, it would be advisable to remove it, as the turning-under of

Picture 11.—Garden at Hazelton.

the moss means the decaying of much more plant-food before the soil can be brought into a good physical and productive condition. For the first year or so during the improvement of these lands it will likely be found that it will be difficult to keep the soil from drying out during a period of drought. This

is due to the very porous nature of the soil after it becomes once dried out. This condition will improve as the vegetable matter in the soil becomes more decomposed and the ground becomes more solid.

As this island is situated along the coast, coast climatic conditions prevail there, including a very heavy rainfall, especially during the winter season. Ground under cultivation at the present time becomes ready for planting from the middle of May to 1st of June, and the growing season continues until the latter part of October.

Very little improvement work has been done on the island. Picture 13 shows a patch of land under improvement. (Note the open ditches.) Tree and small fruits have been tried, but the nature of the climate is such that the island cannot be a successful fruit district. Where vegetables have been tried under favourable conditions, they have invariably made excellent growth. The settlers say they can produce a very high quality of celery. There are a few meadows on the island where they obtain a very strong growth. After the land has been well drained and cropped for a few years it should become solid enough to be seeded down for pasture land, and in this way might be used for dairying and stock-raising purposes. A few of the settlers have chickens, which they say do well there.

Picture 12.—Section of Porcher Island along Kitcatla Inlet. Note rolling nature of land and class of timber-growth.

A number of settlers on this island have pre-empted, and there is a fairly large acreage yet to be taken up. Porcher Island will require the use of considerable capital before produce in any quantity will be handled there. With careful handling of the soil there appears to be no reason why it should not be made productive for agricultural purposes.

The settlers in all the districts visited were very appreciative of the work the Provincial Department of Agriculture had started in their behalf. They expressed their wishes that the Department would continue to assist them wherever possible in the future. Now that the Grand Trunk Pacific line is in operation almost to Kitselas, it should be possible to send in institute lecturers occasionally to talk on such topics as land-clearing, handling of soil after clearing, and other matters of interest to the settlers in the locality.

Picture 13.—Garden spot on Porcher Island, showing land under cultivation.

There is a large amount of land in northern British Columbia that has proved itself to be first-class for agricultural purposes, and it is only in its infancy as far as development is concerned. With this fact in view, it appears to me that a man well versed in all branches of agriculture stationed in the north country could do a great deal in experimental work, and, after having determined the possibilities of the district and studied the markets, be the means of influencing the development of the district along the most profitable lines.

The settlers and others in the districts visited were very glad to render assistance and give information, which was very much appreciated.

All of which is respectfully submitted.

J. F. CARPENTER,
Assistant Provincial Horticulturist.

VICTORIA, B.C.:
Printed by WILLIAM H. CULLIN, Printer to the King's Most Excellent Majesty.
1912.

Applications for bulletins published by the Department should be addressed to the Secretary, Department of Agriculture, Victoria, B.C.